REMARKS

INTRODUCTION:

In accordance with the foregoing, claim 1has been amended and claim 2 has been cancelled without prejudice or disclaimer. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1, 3-12, and 18-26 are pending and under consideration.

ENTRY OF AMENDMENT UNDER 37 C.F.R. § 1.116:

Applicant requests entry of this Rule 116 Response because the amendment of claim 1 should not entail any further search by the Examiner since no new features are being added or no new issues are being raised; and the amendment does not significantly alter the scope of the claims and place the application at least into a better form for purposes of appeal. No new features or new issues are being raised.

The Manual of Patent Examining Procedures sets forth in Section 714.12 that "any amendment that would place the case either in condition for allowance or in better form for appeal may be entered." Moreover, Section 714.13 sets forth that "the Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

INFORMATION DISCLOSURE STATEMENT:

An IDS was submitted on September 24, 2002. However, the PTO-1449 form has not been returned to the Applicant's representative indicating that the reference submitted along with the IDS has been considered. Applicant respectfully requests that the PTO-1449 form be signed and returned to the Applicant's representative.

REJECTION UNDER 35 U.S.C. § 102:

In the Office Action, at page 4, claims 1-12 were rejected under 35 U.S.C. § 102 in view of U.S. Patent No. 6,407,976 to Nagara et al. ("Nagara"). This rejection is traversed and reconsideration is requested.

According to the Office Action, Nagara provides the claimed features of the present

invention in columns 3 and 4 and FIGS. 1A-1C and FIG. 7. However, Nagara generally provides an erasing power P_E to write a space 3 onto a recording surface of a disc that heats a region at a higher temperature than the crystallizing point and lower than a melting point. See column 3, lines 39-67. Rather than teaching or suggesting, "setting the power level of the first pulse depending on the correlation between the mark and the space; setting the power level of the last pulse depending on the correlation between the mark and the space, wherein the power level of the last pulse is set independent of the power level of the first pulse," as recited in independent claim 1, Nagara generally provides an erasing power P_E to write a space 3 onto a recording surface of a disc that heats a region at a higher temperature than the crystallizing point and lower than a melting point. See column 3, lines 39-67. A writing power P_w in Nagara writes a mark 4 onto the recording surface of the disc that heats the region up to a temperature higher than the melting point.

Nagara does not teach or suggest that the erase and writing power levels of the first and last pulses are each set depending on the correlations between a mark and a space between successive marks. Furthermore, Nagara fails to teach or suggest that the power level of the last pulse is set independent of the power level of the first pulse," as recited in independent claim 1. Rather, Nagara generally describes that for the space 3 shown in the figures has a return amount proportional to an amount of a laser light having the erasing power P_E multiplied by a reflectivity of the material in the crystalline phase. See column 4, lines 1-40. Also, for the mark 4, the return amount is proportional to the amount of the laser light having the writing power P_w multiplied by the reflectivity of the material in the melted phase. See FIGS. 1A-1C and 7.

Nothing in Nagara teaches or suggests a relationship of power levels between the first pulse and the last pulse. Instead, a relationship is described in Nagara of the writing power P_w and the erasing power P_E with respect to the reflectivity of the material and the crystalline phase or the melted phase.

Nagara appears to recognize the undershoot 6 that occurs between the mark 4 and the space 3 due to the different power levels. Accordingly, Nagara provides a determination of a status of the mark 4 using a change in an undershoot 6. The changes of the undershoot 6 is detected to control the writing power P_w. See FIGS. 1A-1C and 7. However, the cited reference fails to teach or suggest, "setting the power level of the first pulse depending on the correlation between the mark and the space; setting the power level of the last pulse depending on the correlation between the mark and the space, wherein the power level of the last pulse is set independent of the power level of the first pulse," as recited in independent claim 1.

Accordingly, it is respectfully asserted that Nagara fails to anticipate all the claimed features of independent claim 1. It is respectfully requested that independent claim 1 and related dependent claims be allowed.

In the Office Action, at page 6, claims 18-26 were rejected under 35 U.S.C. § 102 in view of U.S. Patent No. 6,160,784 to Maeda et al. ("Maeda"). This rejection is traversed and reconsideration is requested.

The Office Action refers to columns 4-6 of Maeda as teaching the claimed features of independent claims 18 and 24. However, the referred portions of Maeda generally provide three power levels, a bias level 1, a bias level 2, and a bias level 3 of an NRZI signal of a recording medium. See column 4, lines 42-67. According to Maeda, in a multi-pulsed energy beam, the first and last light pulses are referred to as the head or first and tail or last pulses, respectively. When desired to form a second state area of length 5Tw for the NRZI signal, the recording pulse is made up of the head, comb-shaped and tail pulses. See column 5, lines 1-15. When desired to form the second state area of length 4Tw for the NRZI signal, the recording pulse is made up of the head and tail pulses. When desired to form the second state area of length 3Tw for the NRZI signal, the recording pulse is made up of a single pulse. However, Maeda fails to teach or suggest that the power level of the head or first pulse and the power level of the tail or last pulse are independently controlled. Rather, a combination of the pulses is provided depending on the desired length for the NRZI signals.

Furthermore, Maeda generally provides that the bias level 2 may be equal to the same as either the bias level 1 or 3. See column 5, lines 15-27. Each power level of each of the bias levels in a write mode is also determined. However, the cited reference fails to teach or suggest that the power levels correspond to the first pulse and the last pulse and that the power levels are controlled such that "the power level of said last pulse" is "independent of the power level of said first pulse," as recited in independent claim 18.

In addition, Maeda generally provides that a time of a falling edge of the NRZI signal to the falling edge of the tail pulse is defined as T_{ELP}, the relationship between T_{SLP}, T_{ELP}, and T_{LP} becomes $T_{ELP}=T_{SLP}+T_{LP}$ and that in order to correct a shift in the leading edge, any of the times T_{EFP} and T_{FP} is changed. See column 5, line 28, to column 6, line 67. However, the cited reference fails to teach or suggest a relationship between power levels of the head pulse and the tail pulse; rather, the reference generally provides a relationship between time periods in the NRZI signal. Maeda fails to teach or suggest, "controlling the power level of said last pulse independent of the power level of said first pulse," as recited in independent claim 18.

In addition, Maeda fails to teach or suggest, "providing a different reference power level to each multi-pulse train **depending on the energy or density** of a non-return-to-zero inverted (NRZI) signal detecting a correlation between a current mark and a space between successive marks," emphasis added, as recited in independent claim 24. As previously set forth, Nagara does appear to recognize that the power level of the energy beam may be held at a bias level 1, 2, or 3. However, nothing in Nagara teaches or suggest that the different power levels may be different "depending on the energy or density of a non-return-to-zero inverted (NRZI) signal detecting a correlation between a current mark and a space between successive marks," as recited in independent claim 24.

Accordingly, it is respectfully asserted that Nagara fails to anticipate all the claimed features of independent claims 18 and 24. It is respectfully requested that independent claims 18 and 24 and related dependent claims be allowed.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited. At a minimum, this Amendment should be entered at least for purposes of Appeal as it either clarifies and/or narrows the issues for consideration by the Board.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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